IN THE SPECIFICATION

Please amend the paragraph beginning at page 5, line 9, as follows:

However, the proportional constants k_1 and k_2 usually take a value of about 0.5 to 0.7. Even if a certain resolution enhancing method such as a phase shift method is used, the proportional constants would not go below about 0.4. Therefore, it is difficult to improve the resolution by decreasing the proportional constant. Further, in projection exposure apparatuses, it is said that generally the resolution has its limit approximately at the wavelength of a light source used. Even where an excimer laser is used, it is difficult for a projection exposure apparatus to form a pattern not greater than 0.10 μm. Additionally, if there is any light source having shorter wavelength present, optical materials to be used for the projection optical system (i.e. lens glass materials) could not transmit exposure light of such shorter wavelength, and thus because of resultant failure of projection upon a workpiece to be exposed) the exposure would end in failure. More specifically, almost all the glass materials have a transmissivity nearly equal to zero, in the deep ultraviolet region. Synthetic ~~quartz~~ quartz, which can be produced by use of a special production ~~method~~ method, ~~can meet~~ is transmissive to exposure light of a wavelength of about 248 nm. However, the transmissivity of it decreases steeply ~~in regard to the~~ at a wavelength not greater than 193 nm. For these reasons, it is very difficult to develop a practical glass material having a sufficiently large transmissivity to exposure light of a wavelength not greater than 150 nm, corresponding to a fine pattern of 0.10 μm or narrower. Furthermore, in addition to the transmissivity, a glass material to be used in the deep ultraviolet region must satisfy certain conditions in respect to plural standpoints such

as durability, refractivity, uniformness, optical distortion, machinability and so on. These factors also make the development of a practical glass material difficult.

Please amend the paragraph beginning at page 6, line 22, as follows:

To address such problem, exposure apparatuses which are based on the principle of near-field optical microscope (Scanning Near-Field Optical Microscope: SNOM) have been recently proposed as the measure for enabling microprocessing with an order not greater than 0.10 μm. This is an apparatus in which, by use of near-field light ~~s-ping~~ seeping or escaping from small openings having a size not greater than 100 nm, for example, the workpiece (or a resist applied to it) is locally exposed thereby to exceed the limit of the wavelength of light. However, in such lithographic apparatus based on SNOM structure, the microprocessing operation is carried out using one or a few processing probes in a single continuous drawing stroke. The throughput is therefore very low.

Please amend the paragraph beginning at page 8, line 12, as follows:

Japanese Laid-Open Patent Application No. 2000-112116 and a paper "Sub-diffraction-limited patterning using evanescent near-field optical lithography", by M.M. Alkaisi et al, Appl. Phys. Lett. vol.75, No.22 (1999), have reported that the intensity of near-field light escaping from small openings changes between a case where incidnet light ~~being~~ is polarized in a direction perpendicular to the lengthwise direction of the small ~~opening is incident~~ openings and a case where incident light ~~being~~ is polarized in a direction parallel to the lengthwise direction ~~is incident~~ of the small openings.

Please amend the paragraph beginning at page 8, linc 24, as follows:

Thus, in a lithographic exposure process using near-field light, there is a possibility that, if the exposure is carried out without controlling the polarization of ~~xposure~~ exposure light, the intensity of near-field light leaking from the small openings formed in a mask changes in dependence upon the direction of polarization of exposure light with respect to the lengthwise direction of the small opening, thereby to cause non-uniformness in exposure pattern. Japanese Laid-Open Patent Application No. 2000-112116 thus proposes a mask by which polarization of exposure light can be controlled. This mask is provided with polarizer means arranged to produce an electric-field component parallel to the lengthwise direction of the small opening of the mask, such that near-field light is produced by exposure light being polarized in a particular direction with respect to the lengthwise direction of the small opening.

Please amend the paragraph beginning at page 22, line 15, as follows:

The mask base material 420 comprises an elastic material such as ~~Si3N~~ Si_3N_4 or ~~SiO2~~ SiO_2, for example, that can produce flexure by elastic deformation, in a direction of a normal to the mask surface, that is, in the thickness direction. Also, it is made of a material that can transmit the exposure light. Because the mask base material 420 is made of an elastic material, elastic deformation of the thin film 440 is enabled, as will be described later.

Please amend the paragraph beginning at page 41, line 19, as follows:

Now, a case where an exposure apparatus 1 operates to transfer a plurality

of patterns (the same patterns) in a batch exposure process, will be explained. For manufacture of a mask 400, Si ~~substrate (100)~~ (100) substrate was chosen for a mask supporting member 410. Upon this Si substrate, SiN film as a mask base material 420 was formed with a thickness 500 nm, in accordance with LPCVD (Low Pressure Chemical Vapor Deposition) method Further, upon the mask base material 420, a Cr film as a light blocking film 430 was formed with a thickness 50 nm, in accordance with a sputtering method. Small openings 432 (opening diameter not greater than 100 nm) of a size not greater than the wavelength of exposure light, were formed on the light blocking film 430 into a desired pattern, by means of electron-beam lithographic method. Namely, a Cr film was coated with an electron beam resist, and a pattern was formed on the electron beam resist by means of an electron beam. After the pattern was formed, in accordance with a dry etching method using CC14, the small openings 432 were formed in the Cr film.

Please amend the paragraph beginning at page 49, line 14, as follows:

The mask base material 420A comprises an elastic material such as ~~Si3N~~ Si_3N_4 or ~~Si02~~ $Si0_2$, for example, that can produce flexure by elastic deformation, in a direction of a normal to the mask surface, that is, in the thickness direction. Also, it is made of a material that can transmit the exposure light. Because the mask base material 420A is made of an elastic material, elastic deformation of the thin film 440A is enabled, as will be described later.

Please amend the paragraph beginning at page 55, line 20, as follows:

Now, a case where an exposure apparatus 1A operates to transfer a pattern formed on a mask 400A in a batch process will be explained. For manufacture of a mask 400A, ~~silicon wafer Si (100)~~ Si (100) wafer was chosen for a mask supporting member 410A. Upon this Si substrate, SiN film as a mask base material 420A was formed with a thickness 500 nm, in accordance with LPCVD (Low Pressure Chemical Vapor Deposition) method. Further, upon the mask base material 420A, a Cr film as a light blocking film 430A was formed with a thickness 50 nm, in accordance with a sputtering method. Small openings 432A (opening diameter not greater than 100 nm) of a size not greater than the wavelength of exposure light, were formed on the light blocking film 430A into a desired pattern, by means of electron-beam lithographic method. In this embodiment, the small openings 432A have their lengthwise directions extending in arbitrary directions, as shown in Figure 7.